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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,706	12/02/2003	Yoshihisa Tsukada	1982-0208P	1979
2292	7590	08/16/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			CHEA, THORL	
		ART UNIT		PAPER NUMBER
		1752		

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/724,706	TSUKADA ET AL.
	Examiner Thori Chea	Art Unit 1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 06/10/05.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-18 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All    b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>March 31, 2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed fails to provide support for the language "the polymer is dispersed in the binder as latex" presented in the claimed invention. The specification on page 34, lines 10-15 pointed out by the applicants discloses "it is particularly preferred that the polymer can be dispersed in an aqueous solvent. The dispersion may be such that fine particles of a water-insoluble hydrophobic polymer are dispersed to form latex, or such that polymer molecules molecular or micelle state are dispersed". It fails to disclosed to dispersed in the binder as latex".

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1752

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fukui et al (Pub.No.: US 2002/0102502).

Fukui et al disclose a photothermographic material substantially as claimed. See the SBR latex on page 33, [0360], [0362] wherein the Bu in the polymer chain is 26.5; on page 16, [0144], [0145], page 17, [0147] to [0175]; the organic polyhalogenated compound on page 18, [0188] to [0192] to page 19, [0104], [0195]; the amount of polyhalogenated compound of 0.49 on page 35. [0396], and the Tg of binder is from 20 °C to 70 °C on page 19, [0132]. Fukui discloses a polymer latex having butadiene monomer with percentage and glass temperature same to that claimed in the present claimed invention including the coating amount of polyhalogenated compound. Fukui et al may not disclose that the butadiene unit wherein R01 and R02 are never both hydrogen such as presented in the claimed invention. However, the butadiene defined in the Hackh's Chemical Dictionary, Fourth Edition as "Bivinyl. Bromo-\* Bromoprene. Chloro\* Chloroprene. Methyl-\* isoprene". See the copy of page 116 of Heckh's Chemical Dictionary, Fourth Edition, attached with PTO-Form 892. Therefore, it would have understood in the art the butadiene disclosed in EP'310 would encompass the scope of isoprene claimed in the present claimed invention Fukui et al exemplify the use of a polymer latex containing butadiene monomer within the scope of the claimed invention such as shown on page 17, polymer P-3 to P-9 and page 33, [0361] which encompasses the percentage defined in the claimed invention.

Art Unit: 1752

Accordingly, the invention as claimed lacks novelty. Alternatively, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a latex disclosed therein as binder of the material of Fukui et al, and thereby provide a material similar as claimed. Supposedly, Fukui et al does not disclose the butadiene within the meaning of the butadiene defined in Heckh's Chemical Dictionary, Fourth Edition. The monomer claimed in the present invention would at least found prima facie obvious over Fukui et al due to the similarity of butadiene moiety. A prima facie case of obviousness may be made when chemical compounds have very close structural similarity and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties." In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991). In this case the worker of ordinary skill in the art would have expected that the latex containing a butadiene group would provide similar results as binder. In this case, the worker of ordinary skill in the art would have formed polymer latex containing butadiene unit with a reasonable of providing a latex useful as binder for a photothermographic material.

6. Claims 1-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 1096310 (EP'310)

EP'310 discloses a photothermographic containing binder substantially as claimed. See the latex on page 39 wherein the butadiene group is from 10 to 35 % in the polymer chains and the glass transition temperature thereof is from 10 °C to 85 °C; the SBR latex and polyhalogenated

Art Unit: 1752

compound on page 75, [0308] and page 65, [0275], [0276]. EP'310 discloses a polymer latex having butadiene monomer with percentage and glass temperature same to that claimed in the present claimed invention including the coating amount of polyhalogenated compound, may not disclose that the butadiene unit wherein R01 and R02 are never both hydrogen such as presented in the claimed invention. However, the butadiene define in the Heckh's Chemical Dictionary, Fourth Edition as " Bivinyl. Bromo-\* Bromoprene. Chloro\* Chloroprene. Methyl-\* isoprene". See the copy of page 116 of Hackh's Chemical Dictionary, Fourth Edition, attached with PTO-Form 892. Therefore, it would have understood in the art the butadiene disclosed in EP'310 would encompass the scope of isoprene claimed in the present claimed invention. EP'310 exemplify the use of a polymer latex containing butadiene monomer within the scope of the claimed invention such as shown on page 38-38, polymer P-3 to P-8, P-14 to P-15, P-26-P28 which encompasses the percentage defined in the claimed invention. Accordingly, the invention as claimed lacks novelty. Alternatively, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a latex disclosed therein as binder of the material of EP'310, and thereby provide a material similar as claimed. Supposedly, EP'310 discloses does not disclose the butadiene within the meaning of the butadiene defined in Heckh's Chemical Dictionary, Fourth Edition. The monomer claimed in the present invention would at least found *prima facie* obvious over EP'310 due to the similarity of butadiene moiety. A *prima facie* case of obviousness may be made when chemical compounds have very close structural similarity and similar utilities. "An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties."

Art Unit: 1752

In re Payne, 606 F.2d 303, 313, 203 USPQ 245, 254 (CCPA 1979). See In re Papesch, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) (discussed in more detail below) and In re Dillon, 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1991). In this case the worker of ordinary skill in the art would have expected that the latex containing a butadiene group would provide similar results as binder. In this case, the worker of ordinary skill in the art would have formed polymer latex containing butadiene unit with a reasonable expectation of providing a latex useful as binder for a photothermographic material.

7. The Claims 1-18 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/722,553 (Pub. US 2004/0121273) in view of Fukui et al (US 2001/010250) is withdrawn in view of the Terminal Disclaimer submitted on June 10, 2005.

#### *Response to Arguments*

8. Applicant's arguments filed June 10, 2005 have been fully considered but they are not persuasive because of the reason set forth in the rejection above. The butadiene known in art encompasses the scope of the isoprene such as defined in Hackh's Chemical Dictionary, Fourth Edition, and the percentage of the isoprene monomer claimed in the present claimed invention encompasses the scope of the butadiene monomer disclosed in the applied prior art of record. Also, the isoprene monomer and the butadiene monomer have very close structural similarity and similar utilities as binder. It would have been obvious to replace a hydrogen compound by a monovalent group such as halogen or a methyl group with an expectation of preserving property thereof as binder.

Art Unit: 1752

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1752

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea   
August 10, 2005

  
Thorl Chea  
Primary Examiner  
Art Unit 1752